



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,942	02/06/2001	Jack Wilbur Baldwin	13DV13491	3254

31450 7590 07/07/2003

MCNEES WALLACE & NURICK LLC
100 PINE STREET
P.O. BOX 1166
HARRISBURG, PA 17108-5300

EXAMINER

AFTERGUT, JEFF H

ART UNIT	PAPER NUMBER
----------	--------------

1733

DATE MAILED: 07/07/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/777,942

Applicant(s)

BALDWIN, JACK WILBUR

Examiner

Jeff H. Aftergut

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9,11-14,18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,11-14,18 and 19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

Claim Rejections - 35 USC § 102/103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claim 14 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lopez et al (5,480,603) for the same reasons as expressed in paper no. 11, paragraph 3.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1, 2, 5-8, 11-14, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lopez et al in view of Vennike or Schommer et al and optionally further taken with either one of PCT 98/50211 or Colegrove et al for the same reasons as expressed in paper no. 11, paragraph 5.
5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 4 further taken with the admitted prior art for the same reasons as expressed in paper no. 11, paragraph 6.
6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 4 further taken with either one of Anderson or Chandler for the same reasons as expressed in paper no. 11, paragraph 7.

Response to Arguments

7. Applicant's arguments filed 5-15-03 have been fully considered but they are not persuasive.

Art Unit: 1733

The applicant addressed the reference to Lopez et al regarding claim 14 (the rejection based upon 102/103) and stated that: (1) Lopez did not teach all of the process steps of claim 1 and therefore could not possibly anticipate claim 14 which depended therefrom; and (2) the product produced by Lopez et al was materially different because Lopez applied a continuous film and employed the tackifier in the form of a powder both of which were described in the specification as producing an inferior finished product. These arguments have not been found to be persuasive and will be addressed in detail below.

Applicant is first advised that when the claims are presented in a product by process format the manipulative steps of the product claims do not impart patentability to the claim, rather it is whether the claims are directed to a novel or unobvious product. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process, In re Thorpe, 277 USPQ 964. As discussed in paper no. 11, the reference to Lopez et al suggested that one skilled in the art would have applied the aqueous dispersion which included the tackifier dispersed in the solution in the form of a film (which when one applied the film via gravure or flexographic printing was applied as a discontinuous film) onto the fibers of a tow which have been spread out (which that the tackifier would have been disposed between the individual fibers of the tow). The reference suggested that after the coating operation one removed the water in the dispersion and partially cured the tackifier. The heating operation, upon removal of the water, would have produced a discontinuous film coating between the fibers of the tow, see column 2, lines 11-14. The reference appears to anticipate the claim in that it produced a tackified fiber reinforcement which included a tackifier in a discontinuous film form in a pattern upon the fiber reinforcement.

Art Unit: 1733

The assembly was useful in resin transfer molding. While one could argue that the aqueous dispersion was not applied in a discontinuous pattern, the resulting final product was clearly a discontinuous pattern of tackifier (upon heating). The fact that applicant does not employ an aqueous dispersion which was dried after application is immaterial as to whether the same finished product would have been produced using the different techniques. Once the Office has shifted the burden, it is applicant who must provide evidence that the resulting product of Lopez et al was materially different from the product produced by the claimed method. Note that the Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith, In re Brown, 173 USPQ 685. Once the examiner provides a rational tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product, In re Marosi, 218 USPQ 289.

Here, the applicant has attempted to overcome the rejection by arguing that the specification described the formation of a tackifying film as well as the use of powder coatings and that these have specific disadvantages (and presumably produced a materially different finished product) from the discontinuous liquid pattern coating of the claims. The applicant is advised that like applicant, Lopez et al described the disadvantages of film coating as well as powder coating, see column 1, lines 27-48. The process of Lopez et al is neither a film coating (as suggested by applicant as a continuous film, see column 2, lines 11-14 of Lopez who expressly suggested that the film applied was a discontinuous film coating) nor a powder coating (powder coatings of tackifier typically utilized electrostatic application and Lopez et al applied

Art Unit: 1733

the powder in the form of a liquid dispersion rather than in air with electrostatic application which had disadvantages as identified by applicant and Lopez et al). Clearly, Lopez et al is not concerned with the application of a continuous film of tackifier, as suggested by applicant. The finished end product in Lopez does not contain a film of tackifier but rather has a discontinuous film of the same. Additionally, it does not apply the powder via electrostatic which had problems applying the powder uniformly within the reinforcement. It appears that while Lopez et al employed a powder the reference overcame the problem of producing a "layer of powder that will not go into solution in the RTM resin" by achieving a uniform distribution of powder in the fiber arrangement (rather than a layer of the same). As described with respect to Table I, it is readily apparent that the short beam shear strength and compressive strength of an aqueous dispersion coating perform which was subjected to RTM produced a finished product which allowed for better impregnation in RTM and superior strength than that of powder coated performs (and a finished assembly stronger than or comparable to a perform which contained no tackifier therein at all). The reference made it clear that the properties achieved in the finished assembly when coated with a aqueous dispersion of powder tackifier were in fact better for RTM than powder coated performs with electrostatic application. As noted above, it is believed that the reference to Lopez achieved a uniform distribution of powder about the fibers and that the coating was discontinuous in nature. Applicant has the burden to show through evidence that the finished assembly in their claimed process produced a materially different product from that of Lopez et al. It should be noted that the problems addressed in the specification do not directly compare an aqueous dispersion coated tow (such as Lopez et al) to a tow coated according to the

Art Unit: 1733

claimed invention and thus there has been no direct comparison of the closest prior art to the claimed invention.

The applicant also notes that the Lopez does not force the tackifier into a number of fibers. This argument is also not persuasive as the reference to Lopez et al clearly desired to dispose the powder of the dispersion between the fibers of the tow as best as possible and the reference separated the tow into individual fibers prior to the coating operation, see column 5, lines 30-43, column 10, lines 23-26, Iyer et al and Muzzy et al (both cited herein and referred to by Lopez et al and incorporated by reference as useful spreading techniques prior to a coating operation). Clearly, the spreading of the tow into individual fibers and subsequent coating with the aqueous dispersion forced the tackifier powder between the individual fibers (into the individual fibers of the tow). Applicant's arguments in this regard are not persuasive.

The applicant next addresses the prior art rejection based upon 35 USC 102(a) and the combination of Lopez et al with either one of Vennike or Schommer et al. the applicant is advised that the basis for the combination can be found in Lopez et al itself which suggested that those skilled in the art at the time the invention was made would have applied the aqueous dispersion via gravure or flexographic printing, column 5, lines 23-29 of Lopez et al. Both of Vennike or Schommer et al suggested that flexographic or gravure printing of adhesives was known wherein the same employed an engraved roller for the coating operation and therein the coating applied was a liquid coating which had a discontinuous pattern therein as a function of the engraved pattern upon the roller. While one conceivably could interpret Lopez et al as having a continuous coating application which was made into a discontinuous from by the subsequent evaporation of water from the aqueous dispersion, the reference to Vennike or Schommer et al

Art Unit: 1733

suggested that the techniques for coating the adhesive suggested by Lopez et al himself would have resulted in a discontinuous liquid film of tackifier in emulsion form applied upon the fibers. The applicant attacked Lopez et al on its face alone and did not address the specific discontinuous coating techniques suggested by Vennike or Schommer et al wherein one skilled in the art would have understood that the coating according to Lopez (who expressly suggested the use of flexographic or gravure coating techniques) would have necessarily yielded a liquid coating of aqueous dispersion which was a patterned discontinuous coating in liquid form. The applicant argues that because Lopez et al suggested a continuous film that there was no reason to look to Vennike or Schommer et al and that the reference to Lopez taught away from the use of the patterned coating of Vennike or Schommer et al. however, the reference to Lopez et al itself would have led one skilled in the art to look to Vennike or Schommer et al as discussed above. Additionally, there is no requirement in Lopez et al that the film of liquid be applied as a continuous film, rather applicant is extracting the same from the dip coating or bath coating techniques described in more detail in Lopez et al. These are mere examples of suitable coating techniques and as discussed at column 5 of Lopez et al the reference clearly is not so limited to the specific coating techniques but rather included coating via flexographic or gravure printing in a discontinuous pattern whereupon the application of the dispersion would have been a discontinuous coating of the material in liquid form. The applicant is advised that in both of Vennike or Schommer et al a pattern of application was provided by the engraving disposed upon the rollers used in the coating operation. The applicant argues that there is no forcing of the resin into a number of fibers. The applicant is advised that the spreading prior to the coating would have forced the tackifier into the individual fibers within the scope of the claimed

Art Unit: 1733

invention. Applicant additionally noted that the claims at hand did not include a drying step, however the claims at hand are open in claim language and the claims certainly do not exclude a drying step in the process. In this regard the claims are not commensurate in scope with the claims.

The optionally applied references to PCT '211 and Colegrove were cited to show that in RTM one skilled in the art of forming a perform would have understood that a pattern application of the tackifier was desirable. The applicant argues that PCT '211 did not apply the tackifier in a manner suitable for Lopez by applying the powder as a free flowing powder of from a solution. The applicant is advised that despite the same, one viewing PCT '211 would have readily understood that it was desirable to provide the tackifier in a discontinuous pattern. Because Lopez et al provided for techniques which would have allowed for the liquid dispersion of powder to be applied in a pattern via gravure or flexographic printing (which as taught by Vennike or Schommer et al would have provided a discontinuous liquid pattern coating), it would have been obvious to employ the techniques of Vennike or Schommer et al to provide a discontinuous pattern coating of liquid adhesive in Lopez with none but the expected benefits as noted by PCT '211. Likewise, while Colegrove employed a different coating technique which included a transfer operation, the applicant is advised that those skilled in the art viewing Colegrove would have understood the merits of application of the coating in a discontinuous pattern in formation of a perform for RTM. The reference to Lopez et al itself suggested suitable coating techniques which would have applied the liquid in a pattern upon the fibers and formed the same between the fibers which included flexographic and gravure printing (which as evidenced by Vennike or Schommer et al suggested that the same was useful for adhesive

Art Unit: 1733

application in a discontinuous pattern). It would have been obvious to use the coating techniques described within the four corners of Lopez et al itself to achieve a discontinuous pattern wherein the same was known per se in the art of performs as evidenced by Colegrove or PCT '211.

With respect to the various other references and claims rejected hereinabove, the applicant takes the position regarding the same that because Lopez et al in combination with Vennike or Schommer et al optionally further in view of Colegrove or PCT '211 failed to teach the invention from which these claims depend that the dependent claims are allowable. The applicant is advised, however, as addressed above, that the rejection based upon Lopez is not deficient for the reasons addressed above. Because applicant has failed to further address the additional references applied, it is believed that applicant agrees with the Office interpretation of the same. Because there is no deficiency in the rejection of the independent claim (and because applicant has not specified deficiency regarding the dependent claims and/or the other applied references) it is believed that the dependent claims likewise are unpatentable for the reasons earlier presented.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Muzzy et al and Iyer et al are cited to show the various spreading techniques incorporated by reference in Lopez et al.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**


Art Unit: 1733

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 703-308-2069. The examiner can normally be reached on Monday-Friday 6:30-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA
July 1, 2003